

**§ 179.220-9 Compartment tanks.**

(a) The inner container may be divided into compartments by inserting interior heads, or by fabricating each compartment as a separate container and joining with a cylinder, or by fabricating each compartment as a separate tank without a joining cylinder. Each compartment must be capable of withstanding, without evidence of yielding or leakage, the required test pressure applied in each compartment separately, or in any combination of compartments.

(b) When the inner container is divided into compartments by fabricating each compartment as a separate container and joining with a cylinder, the cylinder must have a plate thickness not less than that required for the inner container shell and must be applied to the outside surface of the straight flange portion of the container head. The cylinder must fit the straight flange tightly for a distance of at least two times the plate thickness, or 1 inch, whichever is greater and must be joined to the straight flange by a full fillet weld. Distance from fillet weld seam to container head seam must be not less than 1½ inches or three times the plate thickness, whichever is greater.

[Amdt. 179-9, 36 FR 21341, Nov. 6, 1971]

**§ 179.220-10 Welding.**

(a) All joints must be fusion-welded in compliance with AAR Specifications for Tank Cars, appendix W. Welding procedures, welders, and fabricators shall be approved.

(b) Radioscopy of the outer shell is not a specification requirement.

(c) Welding is not permitted on or to ductile iron or malleable iron fittings.

[Amdt. 179-9, 36 FR 21341, Nov. 6, 1971]

**§ 179.220-11 Postweld heat treatment.**

(a) Postweld heat treatment of the inner container is not a specification requirement.

(b) Postweld heat treatment of the cylindrical portions of the outer shell to which the anchorage or draft sills are attached must comply with AAR Specifications for Tank Cars, appendix W.

(c) When cold formed heads are used on the outer shell they must be heat treated before welding to shell if postweld heat treatment is not practicable due to assembly procedures.

[Amdt. 179-9, 36 FR 21341, Nov. 6, 1971]

**§ 179.220-13 Inner container manway nozzle and cover.**

(a) Inner container manway nozzle must be of approved design with access opening at least 18 inches inside diameter, or at least 14 inches by 18 inches obround or oval.

(b) Manway covers must be of approved type. Design must provide a secure closure of the manway and must make it impossible to remove the cover while the tank interior is under pressure.

(c) All joints between manway covers and their seats must be made tight against leakage of vapor and liquid by use of suitable gaskets.

(d) Manway covers must be cast, forged, or fabricated metal complying with subsection §179.220-7(g) of this section.

(e) A seal must be provided between the inner container manway nozzle and the opening in the outer shell.

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**§ 179.220-14 Openings in the tanks.**

Openings in the inner container and the outer shell must be reinforced in compliance with AAR Specifications for Tank Cars, appendix E. In determining the required reinforcement area for openings in the outer shell, *t* shall be one-fourth inch.

[Amdt. 179-9, 36 FR 21341, Nov. 6, 1971]

**§ 179.220-15 Support system for inner container.**

(a) The inner container must be supported within the outer shell by a support system of adequate strength and ductility at its operating temperature to support the inner container when filled with liquid lading to any level. The support system must be designed to support, without yielding, impact loads producing accelerations of the following magnitudes and directions when the inner container is loaded so that the car is at its rail load limit,